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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,247	08/31/2000	John William Alcorn	AUS9-2000-0464-US1	4520

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EXAMINER

VU, TUAN A

ART UNIT	PAPER NUMBER
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2124

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DATE MAILED: 07/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/653,247

Applicant(s)

ALCORN, JOHN WILLIAM

Examiner

Tuan A Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. This action is responsive to the application filed 4/13/2004.

As indicated in Applicant's response, claims 12, 14, 15, 18, 21 have been amended; and claims 1-11, 13, 16-17, 22-23 canceled, and claims 24-35 added. Claims 12, 14-15, 18, 21, and 24-35 have been submitted for examination. The corrected drawings are also filed and considered.

Amendment Objections

2. The amendment to the claims filed on 4/13/2004 does not comply with the requirements of 37 CFR 1.121(c) because a group of claims newly added, i.e. claims 32-35, does not comply to the following required format: "Any claim added by amendment must be indicated with the status of "new" and presented in clean version." Amendments to the claims filed on or after July 30, 2003 must comply with 37 CFR 1.121(c) which states:

(c) *Claims*. Amendments to a claim must be made by rewriting the entire claim with all changes (e.g., additions and deletions) as indicated in this subsection, except when the claim is being canceled. Each amendment document that includes a change to an existing claim, cancellation of an existing claim or addition of a new claim, must include a complete listing of all claims ever presented, including the text of all pending and withdrawn claims, in the application. The claim listing, including the text of the claims, in the amendment document will serve to replace all prior versions of the claims, in the application. In the claim listing, the status of every claim must be indicated after its claim number by using one of the following identifiers in a parenthetical expression: (Original), (Currently amended), (Canceled), (Withdrawn), (Previously presented), (New), and (Not entered).

(1) *Claim listing*. All of the claims presented in a claim listing shall be presented in ascending numerical order. Consecutive claims having the same status of "canceled" or "not entered" may be aggregated into one statement (e.g., Claims 1-5 (canceled)). The claim listing shall commence on a separate sheet of the amendment document and the sheet(s) that contain the text of any part of the claims shall not contain any other part of the amendment.

(2) *When claim text with markings is required*. All claims being currently amended in an amendment paper shall be presented in the claim listing, indicate a status of "currently amended," and be submitted with markings to indicate the changes that have been made relative to the immediate prior version of the claims. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. Only claims having the status of "currently amended," or "withdrawn" if also being amended, shall include markings. If a withdrawn claim is currently amended, its status in the claim listing may be identified as "withdrawn—currently amended."

(3) *When claim text in clean version is required*. The text of all pending claims not being currently amended shall be presented in the claim listing in clean version, i.e., without any markings in the presentation of text. The presentation of a clean version of any claim having the status of "original," "withdrawn" or "previously presented" will constitute an assertion that it has not been changed relative to the immediate prior version, except to omit markings that may have been present in the immediate prior version of the claims of the status of "withdrawn" or "previously presented." Any claim added by amendment must be indicated with the status of "new" and presented in clean version, i.e., without any underlining.

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(4) *When claim text shall not be presented; canceling a claim.*

(i) No claim text shall be presented for any claim in the claim listing with the status of "canceled" or "not entered."

(ii) Cancellation of a claim shall be effected by an instruction to cancel a particular claim number. Identifying the status of a claim in the claim listing as "canceled" will constitute an instruction to cancel the claim.

(5) *Reinstatement of previously canceled claim.* A claim which was previously canceled may be reinstated only by adding the claim as a "new" claim with a new claim number.

Since the reply filed on 4/13/04 appears to be *bona fide*, and mostly because Applicant has enumerated in the Remarks (pg. 5) the number of added claims, the amendment would not be rejected for being in a non-responsive form; and is now entered for examination.

Specification

3. The disclosure is objected to because of the following informalities: there appears to be a misspell at element "implemenetation" (pg. 17, line 7).

Appropriate correction is required.

Claim Objections

4. Claim 31 is objected to because of the following informalities: the recited 'computer-readable memory for causing a computer to build Enterprise Java Bean ...' (lines 1-2) should be corrected to encompass a content embodied in the recited memory medium that when executed would cause the computer to do some task, i.e. a readable memory by itself cannot cause to build a object. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12, 14-15, 18, 21, and 24-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Codella et al., "Support for Enterprise JavaBeans in Component Broker", IBM Systems Journal, vol. 37, No. 4, 1998, pp. 502-538 (hereinafter Codella), in view of Bowman-Amuah, USPN: 6,529,948(hereinafter Bowman).

As per claim 12, Codella discloses a method of building Enterprise Java Bean objects that meet an object-oriented query comprising:

executing an object-oriented query on an application server such that the server returns data objects in response to the query (e.g. left 2nd para, pg. 505; Fig. 1: *OTM* architecture pg. 504);

gathering each data object returned by the application server to a Java container interface or entityBean interface (Support for entity beans - 3rd para L, to 3rd para R, pg. 521; Fig. 11-pg. 518);

contextual narrowing the Java entityBean interface object via the use of a Java Enumeration (e.g. *java.util.Enumeration* – 3rd para R, pg. 521); and

narrowing the Java Enumeration to Enterprise Java Bean(EJB) objects having attributes that meet the conditions of the object-oriented query (e.g. *narrow(obj)* – pg. 510, bottom L and R column; *beans' life cycle; EjbContext* - pg. 519 Left; – Note: narrowing Ejb object created via a Tie and a Finder to a contextual EJB is equivalent to submitting Enumeration to a Tie and then let the created object bean be disposed after being contextually narrowed).

But Codella does not disclose that the entityBean interface or the Java container interface is a Java Vector; nor does Codella disclose adding data object to said Java Vector. The use of stubs (pg. 516, right) on the client side to encapsulate data for a session-based data transmission

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being serialized (pg. 528, L) as taught by Codella is suggestive of an equivalent on a server side via the use of Java structures to contain (e.g. array) stream of received objects from the client end and the use of Java Vector in conjunction with an enumeration was a known concept in Java-implemented programs used in data serialized distribution and collection. Bowman, in a method to communicate Corba environment with enterprise beans in order to provide object-oriented distribution, discloses server beans implementation of business data and Java Vector in conjunction with Enumeration analogous to the EJB interface by Codella (col. 203, li. 48 to col. 204, li. 40). It would have been obvious for one of ordinary skill in the art at the time the invention was made to add to the creation of EJB objects by Codella a Java Vector to contain the objects being received from the client end, e.g. adding such objects as into an array (Java Vector), so to allow the Vector to operate with the Enumeration as suggested by Bowman because, according to Bowman, Enumeration in conjunction with a specific data type of a Vector would provide data type safety protection and less type checking burden, which is a well-known concept in Java programming language.

Nor does Codella disclose adding each data object returned by the application server to a Java Vector; and converting the Java Vector to the Enumeration. Since a vector is just an array to receive a series of input data and the Enumeration is taking data from a Vector as they are added into the Enumeration, this limitation would have been obvious by virtue of the rationale as set forth above using Bowman.

As per claim 14, Codella discloses a Managed Object Framework (e.g. 3rd para L, pg. 505).

As per claim 15, Codella (combined with Bowman) does not explicitly disclose calling an evaluate() method from a IqueryIterableHome Object. But Codella teaches Enumeration (re claim 12) and serializing of transaction threads in conjunction with an entity Home beans interface for addressing a transaction or query (pg. 528, 530; Fig. 16-17; *Query Service*, *Transaction service*, pg. 511) and a Broker-connected client effecting collection of objects to be iterated in a managed object home (e.g. Fig. 6-10; *iterator* – pg. 513); hence suggests creating a server-side a EJB container home in order to create a queryable object, such object being processed in a serializable manner so as to be iterated into a form adapted for the execution of the requested query, i.e. the notion of a queryable object being iterable in a home container. At the time the invention was made, it was a known concept that the EJB objects (e.g. query process with use of JavaBeans by Bowman to retrieve account information as mentioned above) have methods and properties defined for accessing the appropriate tables and fields of the database, i.e. the client application does not have direct access to the database, but instead has access through the EJB objects. As disclosed by Codella, a container via the EJB interface home is created to correlate business queries or transaction commands from the client application to EJB objects for executing those commands (Fig 6-10), i.e. a transaction attribute checking with context support suggesting enabling a safe invocation of beans methods in order to map (e.g. Fig. 18-20) client initiated commands to EJB objects to access the database. Thus, Codella teaches the properties and methods of the EJB objects that are used to access the database are determined to create the database (e.g. *Mapping EJB transaction attributes* - pg. 532-536) as well as invocation of querying methods (e.g. *find_factory_from_string* – pg. 510; *Invocation* – pg. 536;). In case an object equivalent to 'IqueryableIterableHome' with

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evaluate() method has not been disclosed by Codella to parse the query and invoke calls to effect client commands for query fulfilling, it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide Codella's beans Home object/environment with a object equivalent to 'IQueryableIterableHome' in order to implement therein a method to evaluate or to process the commands from the client application as suggested by Codella (in view of Bowman), because only through the object created by the EJB container home does the client transaction query commands get executed using this Corba/EJB paradigm, the creation of a queryable object container with EJB objects and methods for evaluating the command string being but an indispensable step to consummate the client's request.

As per claim 18, the limitation to use a Java Vector in order to operate with a Enumeration has been disclosed and addressed in claim 12. The limitation of using a method from a Vector object to create an Enumeration would have been an obvious variation of the teachings as mentioned above.

As per claim 21, the limitation of using a narrow step has been addressed in claim 12. Codella has suggested a separate object being instantiated for a query, such as each instance of client request being treated as a remote and stand-alone event for which a separate object for such specific instance and attribute are allotted to (e.g.; *Obj_var, find_factory_from_string* – pg. 510; *Invocation* – pg. 536) and attribute checking (e.g. pg. 532-536). The limitation of creating an object being remote to the client and being independent of the EJB home to effect such narrowing would have been an obvious variation of the above-mentioned teachings by Codella. Hence, it would have obvious for one of ordinary skill in the art at the time the invention was

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made to create the EJB home container by Codella with a separate object, e.g. an object equivalent in name to 'PortableRemoteObject', so that it includes a narrow method to effect the attributes checking as taught by Codella, such object being a separate entity that can be used on the fly by the container and discarded as soon as the narrowing step is yielding some context-abiding objects, thus alleviating resources retention (e.g. garbage collection -pg. 510).

As per claim 24, this is a MOFW version of claim 15, hence is rejected using the corresponding rejection as set forth therein in view of the rejection (MOFW) in claim 14.

As per claims 25 and 26, Codella discloses CORBA (pg. 503-505; Fig. 7).

As per claim 27, Codella discloses a programmable apparatus for building EJB objects that meet conditions of an object-oriented query, comprising:

a memory, an application server program therein, and means

for directing the application server to evaluate the object-oriented query and return objects responsive to the query (e.g. left 2nd para, pg. 505; Fig. 1: *OTM* architecture pg. 504 – Note: server machine with memory to store application server program is an inherent feature);

for gathering each data object returned by the application server to a Java container interface or entityBean interface (Support for entity beans - 3rd para L, to 3rd para R, pg. 521; Fig. 11-pg. 518);

for contextual narrowing the Java entityBean interface object via the use of a Java Enumeration (e.g. *java.util.Enumeration* – 3rd para R, pg. 521); and

for narrowing the Java Enumeration to Enterprise Java Bean(EJB) objects having attributes that meet the conditions of the object-oriented query (e.g. *narrow(obj)* – pg. 510, bottom L and R column; *beans' life cycle; EjbContext* - pg. 519 Left)

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But Codella does not disclose that the entityBean interface or the Java container interface is a Java Vector; nor does Codella disclose adding data object to said Java Vector. Nor does Codella disclose adding each data object returned by the application server to a Java Vector; nor does Codella disclose converting the Java Vector to the Enumeration. But these limitations have been addressed in claim 12 above.

As per claims 28-30, these claims correspond to claims 24-26, respectively, and are rejected using the corresponding rejections as set forth therefor.

As per claim 31, Codella (combined with Bowman) discloses a computer-readable memory with program embodied therein, such program operable to build EJB objects that meet conditions of an object-oriented query, the memory comprising: a computer-readable medium and a program stored therein for causing the computer to perform the steps of

evaluate (query);

add data (to a Java Vector);

convert (to an Enumeration) and

narrow (to Enterprise Java Beans ...having attributes), all of which steps corresponding to the limitation steps of claim 27. Hence, the corresponding rejections as set forth in claim 27 are herein applied.

As per claim 32, Codella disclose a stored program for evaluating object-oriented query (e.g. *Mapping EJB transaction attributes* - pg. 532-536; Fig. 16-17; *Query Service, Transaction service*, pg. 511).

As per claims 33-35, refer to claims 24-26, respectively.

Conclusion

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7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (703)305-7207. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for formal communications intended for entry)

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or: (703) 746-8734 (for informal or draft communications, please consult Examiner before using this number)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA. , 22202. 4th Floor(Receptionist).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VAT
July 1, 2004

Kakali Chakraborty

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